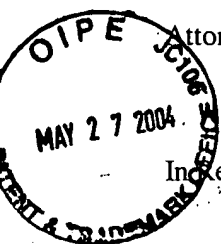


#10
6-12-04
A



Attorney's Docket No. 074451.P127D5

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Edward L. Schwartz

Examiner: Chen, Wenpeng

Application No.: 09/801,361 ✓

Art Unit: 2624

Filed: March 6, 2001

For: Method And Apparatus For Clipping Coefficient
Values After Application Of Each Wavelet Transform

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SUBMISSION OF FORMAL DRAWINGS

Sir:

Transmitted herewith are **Twenty-Six (26)** sheets of the formal drawings for the above-identified application.

If any additional fee is required, please charge Deposit Account No. 02-2666.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

Dated: 5/24/2004

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May 24, 2004
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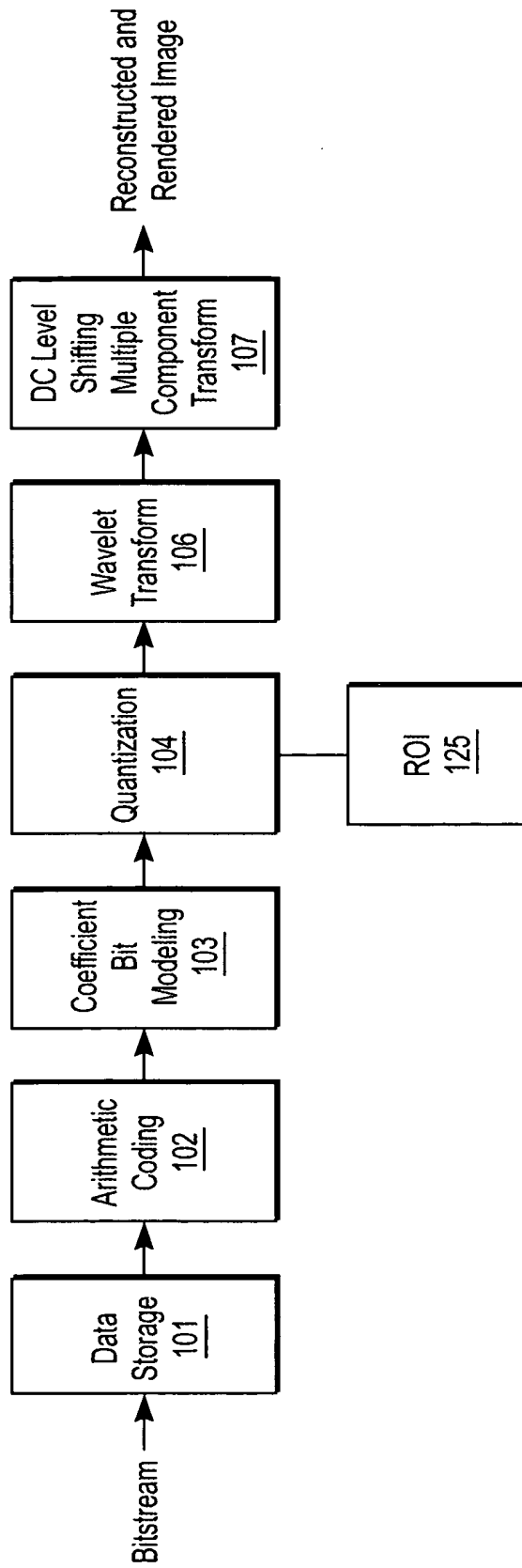


FIG. 1
(PRIOR ART)

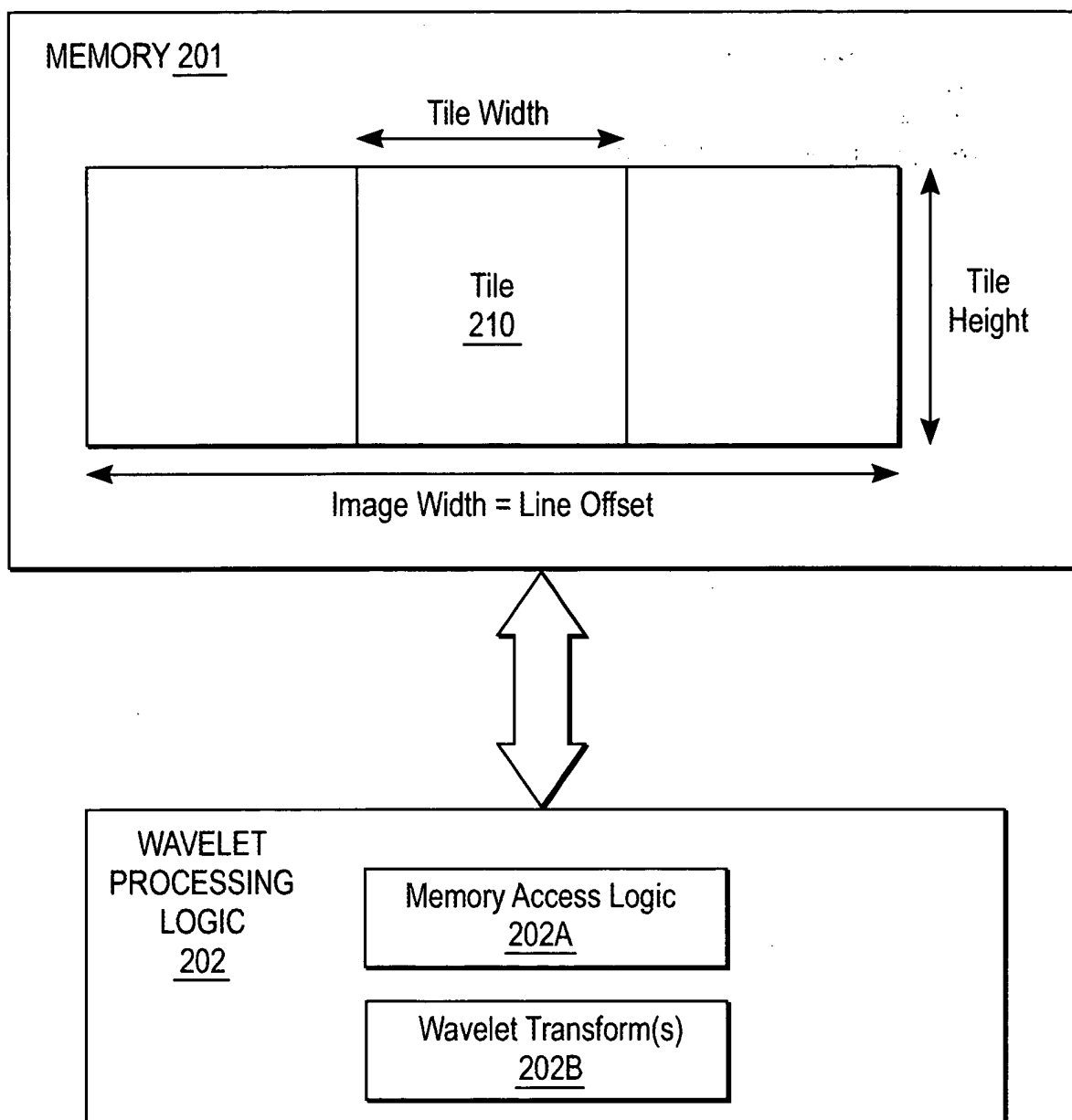


FIG. 2

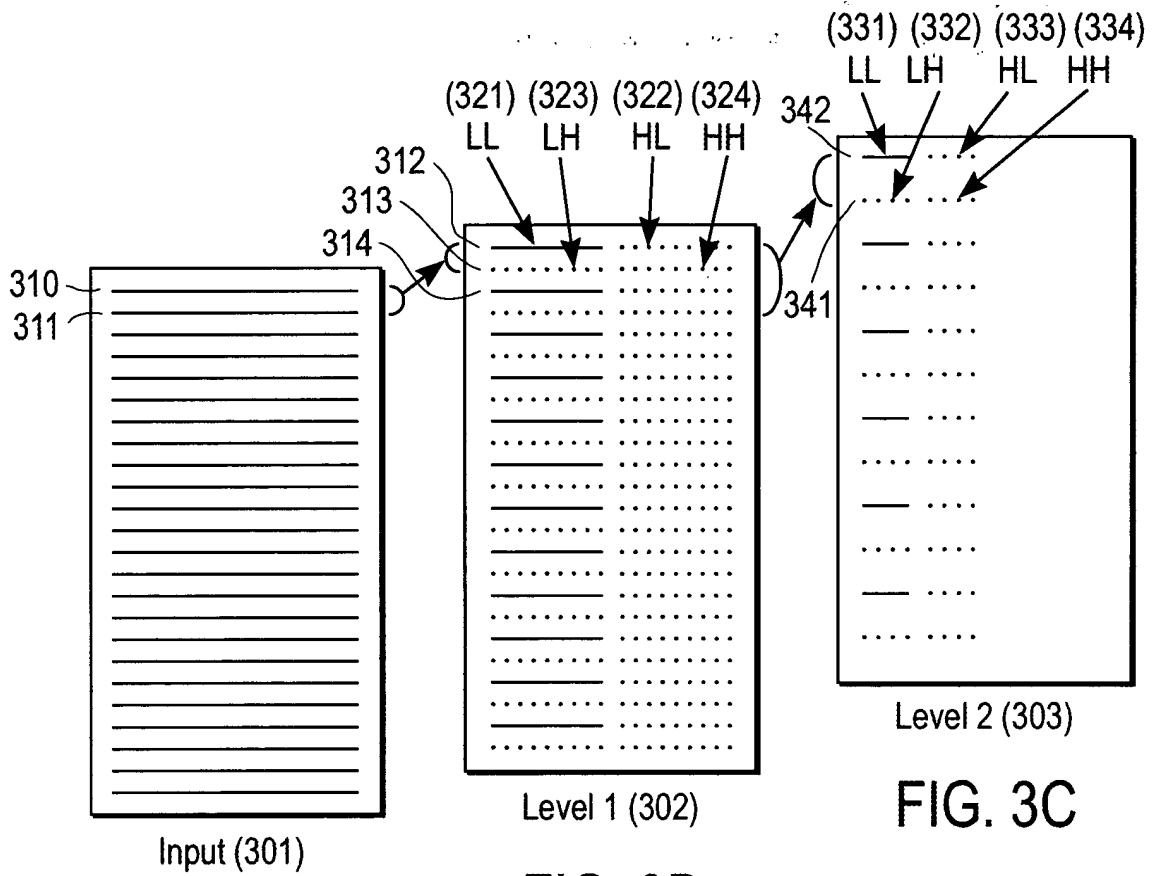
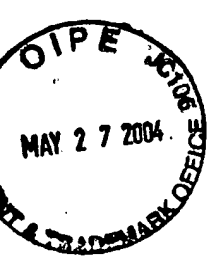
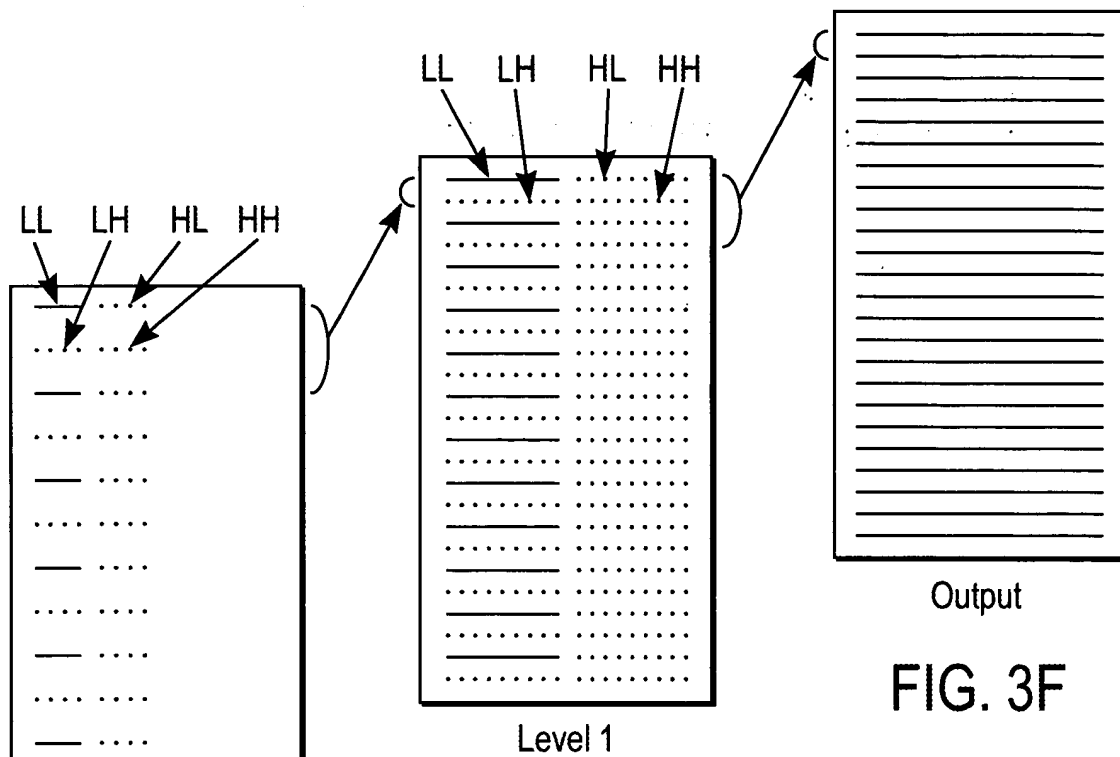


FIG. 3A

FIG. 3B

FIG. 3C



Level 2
FIG. 3D

Level 1
FIG. 3E

Output
FIG. 3F

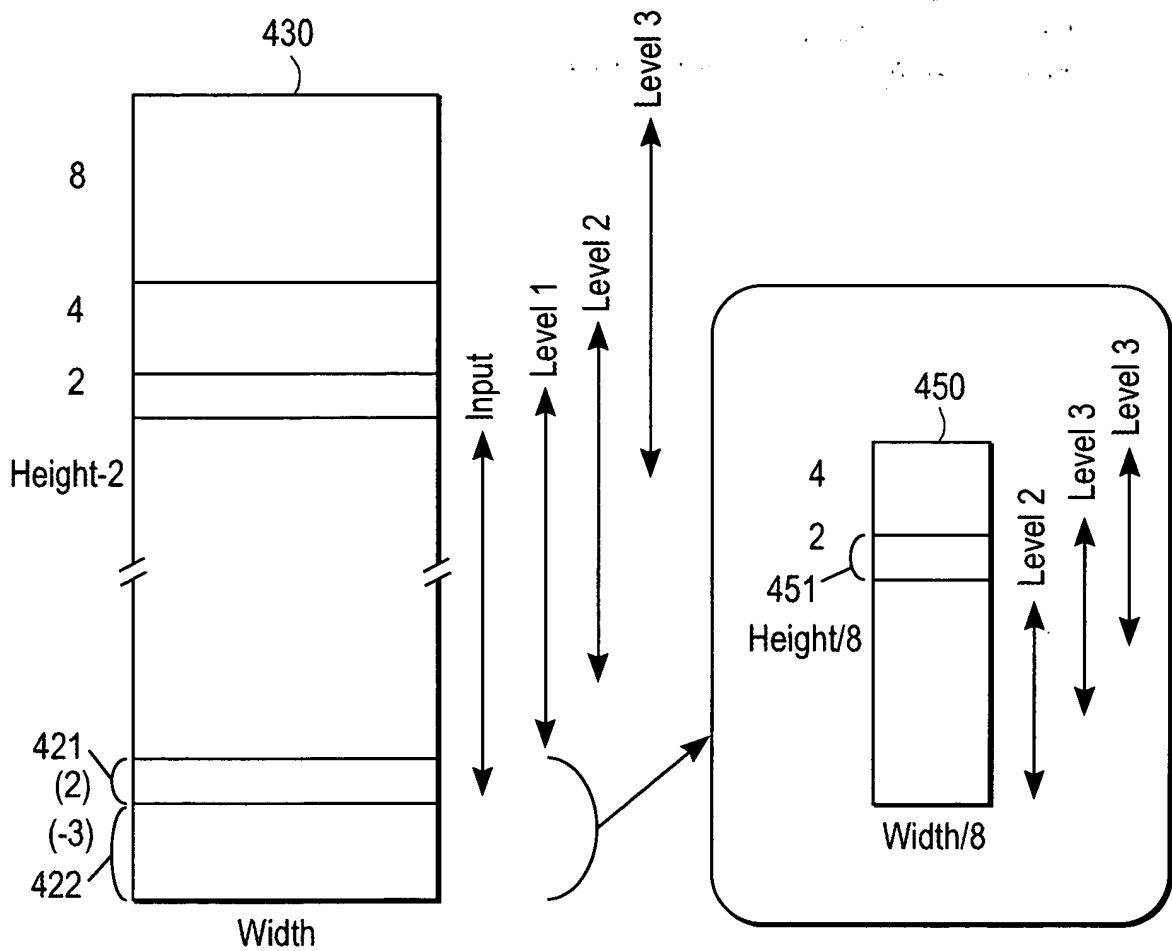


FIG. 4A

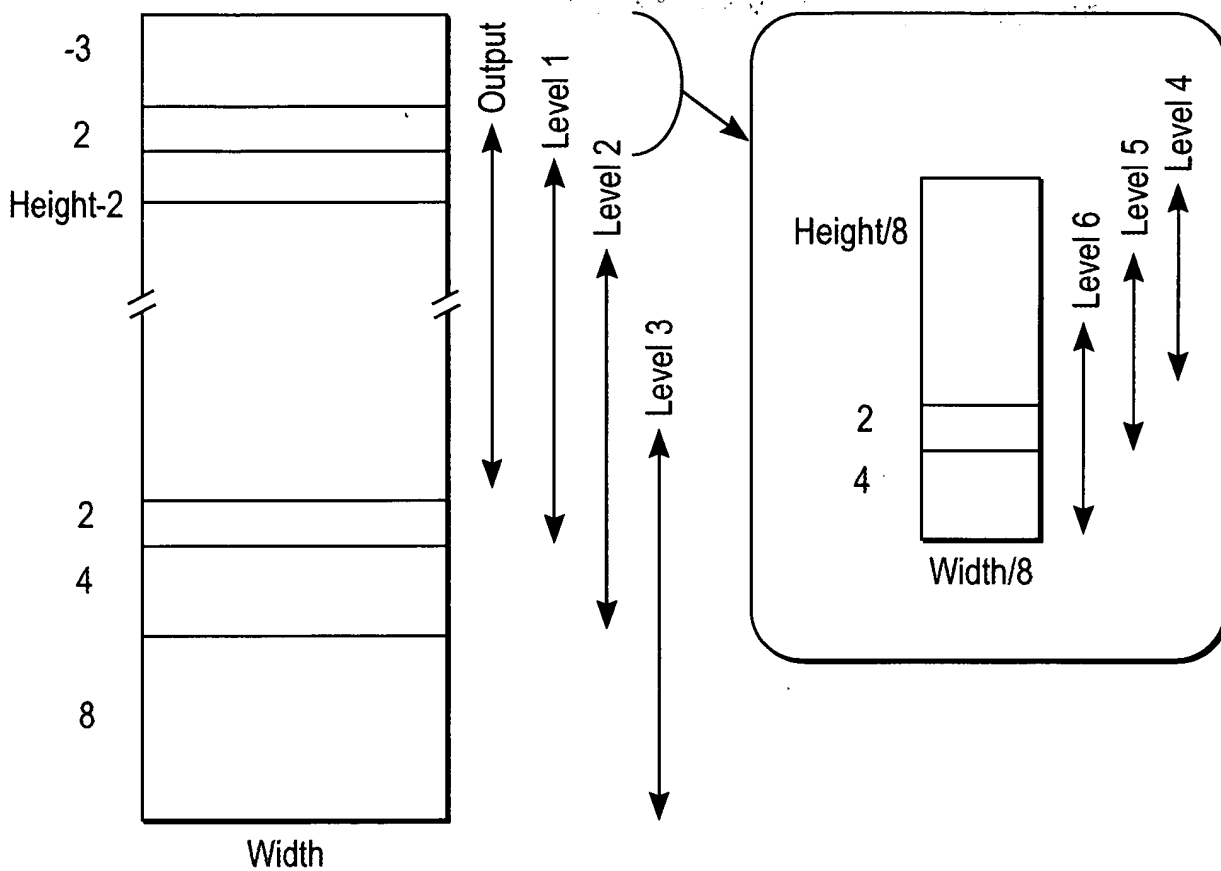


FIG. 4B

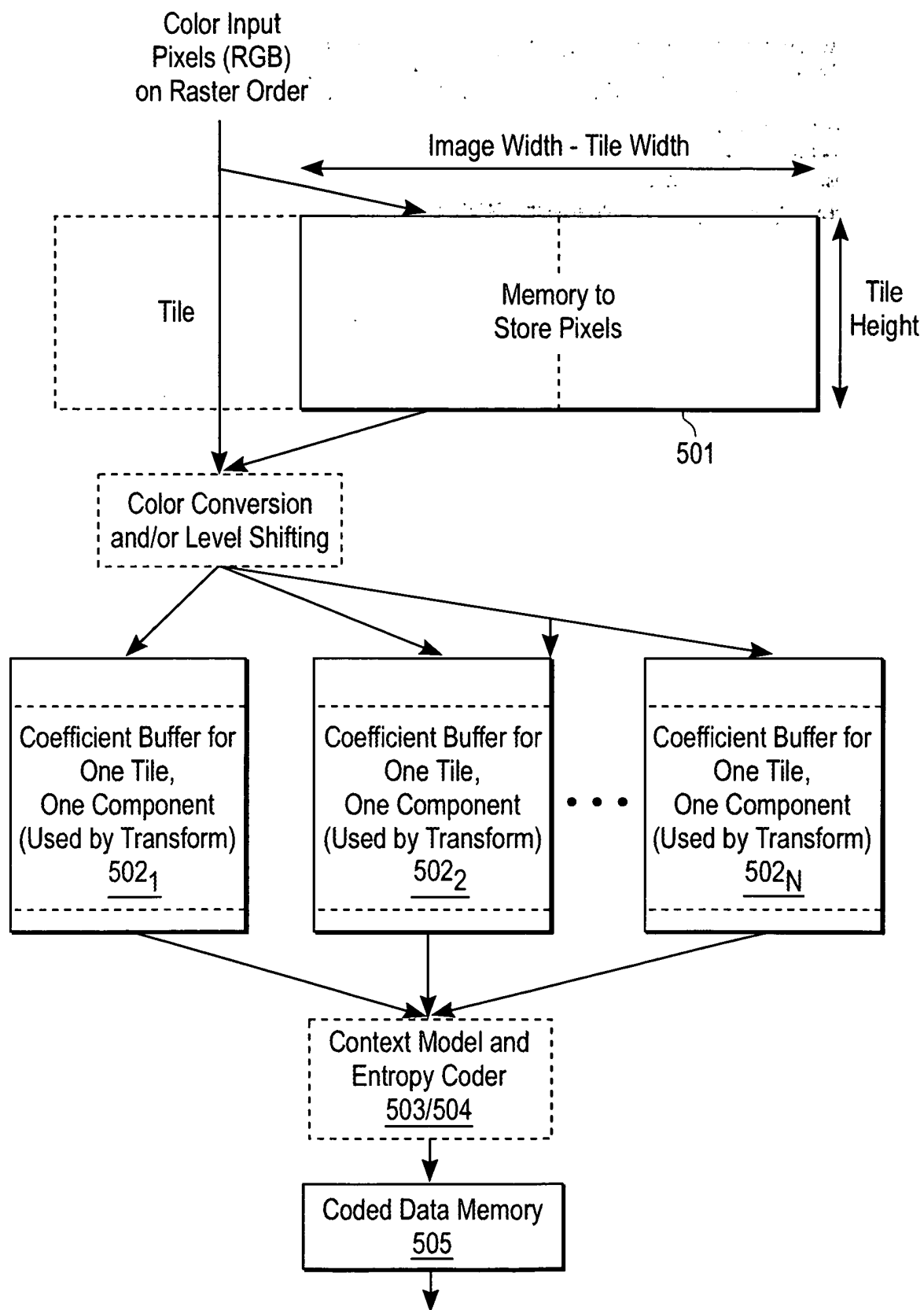
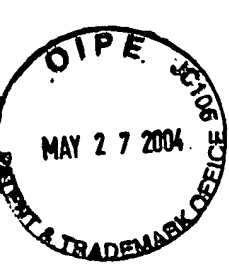


FIG. 5

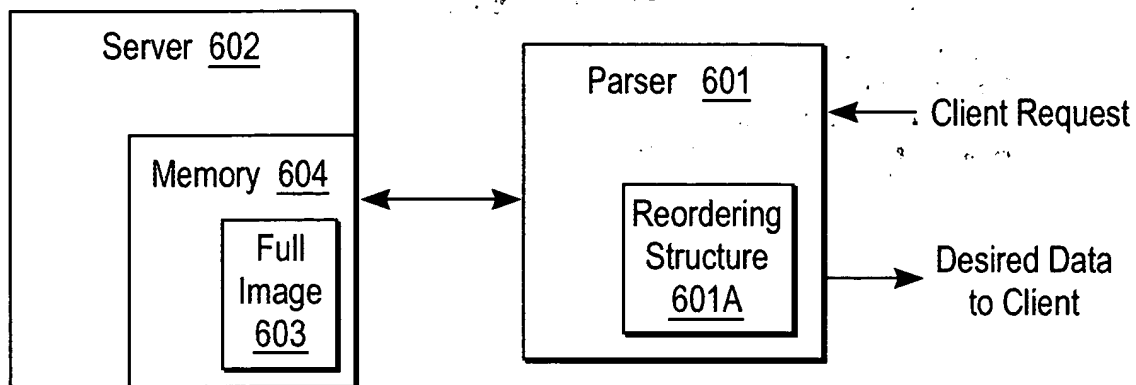
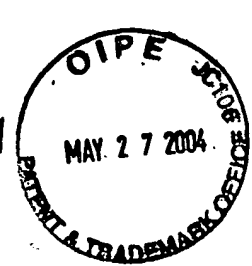


FIG. 6A

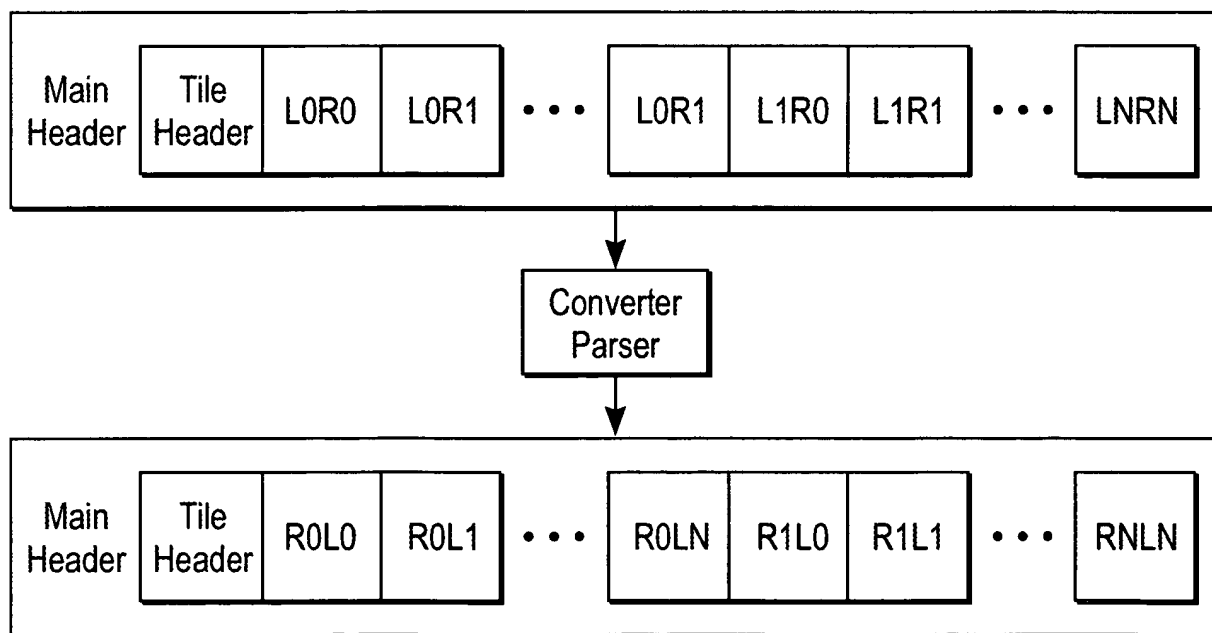


FIG. 6B

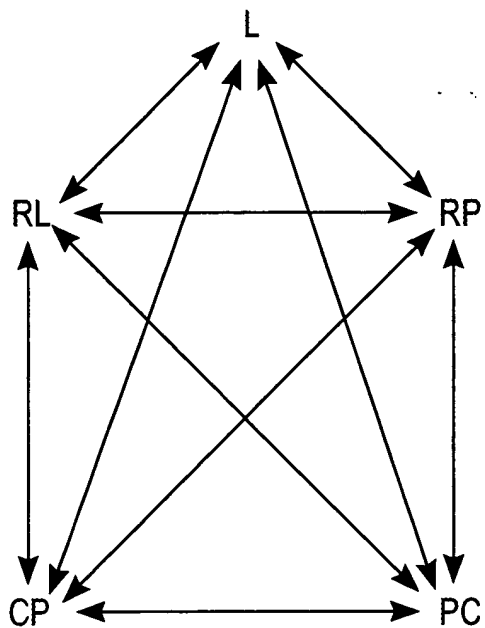


FIG. 7A

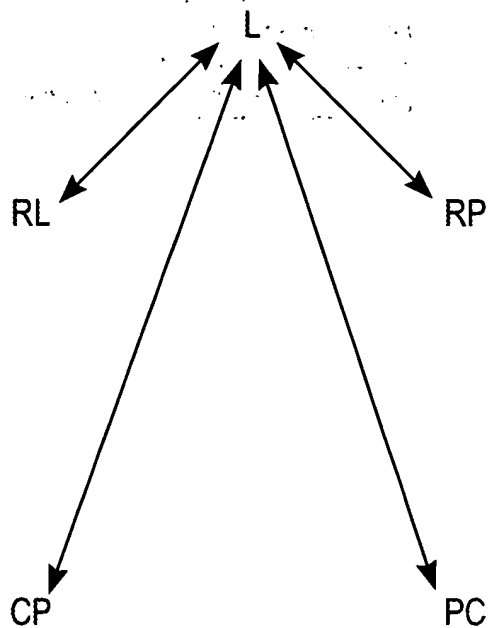


FIG. 7B

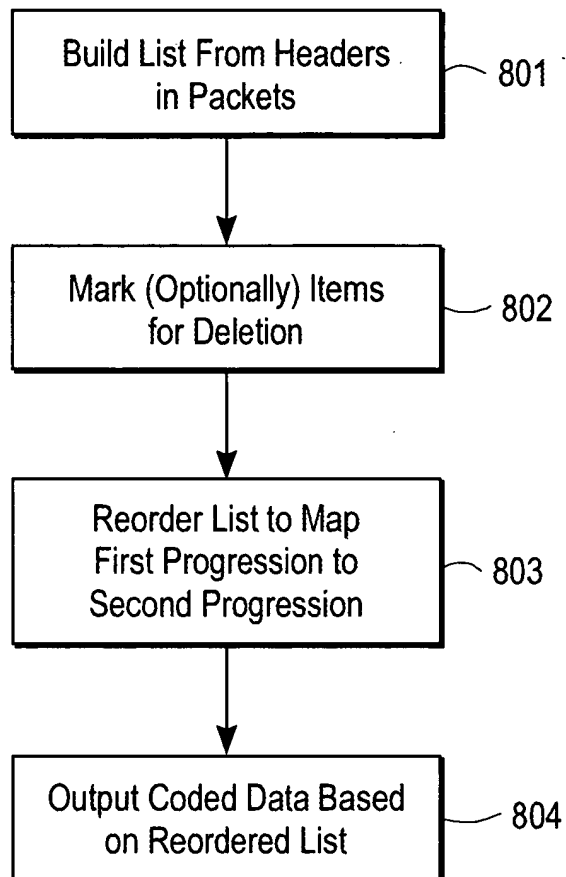
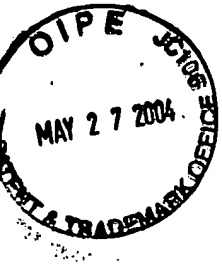


FIG. 8

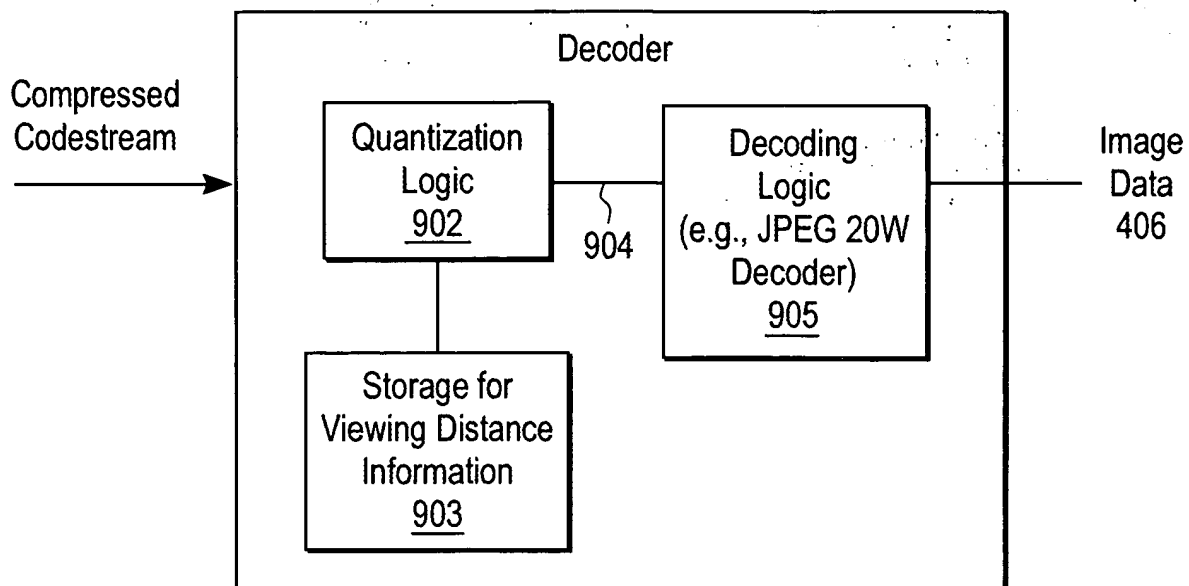


FIG. 9

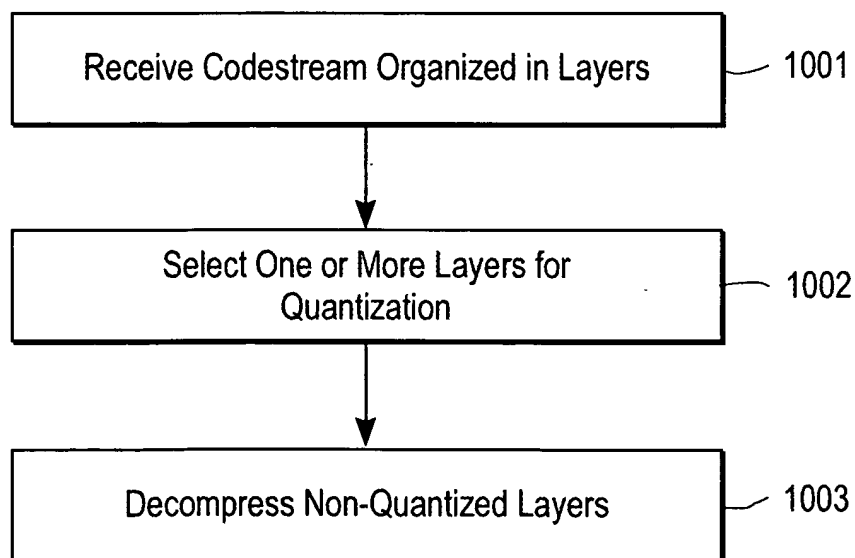


FIG. 10

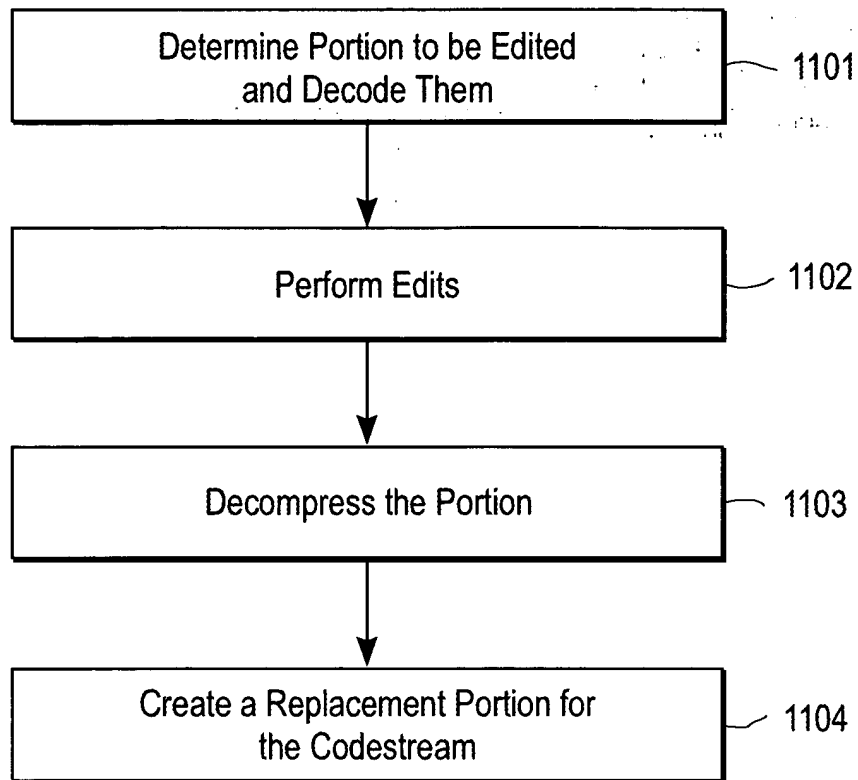


FIG. 11

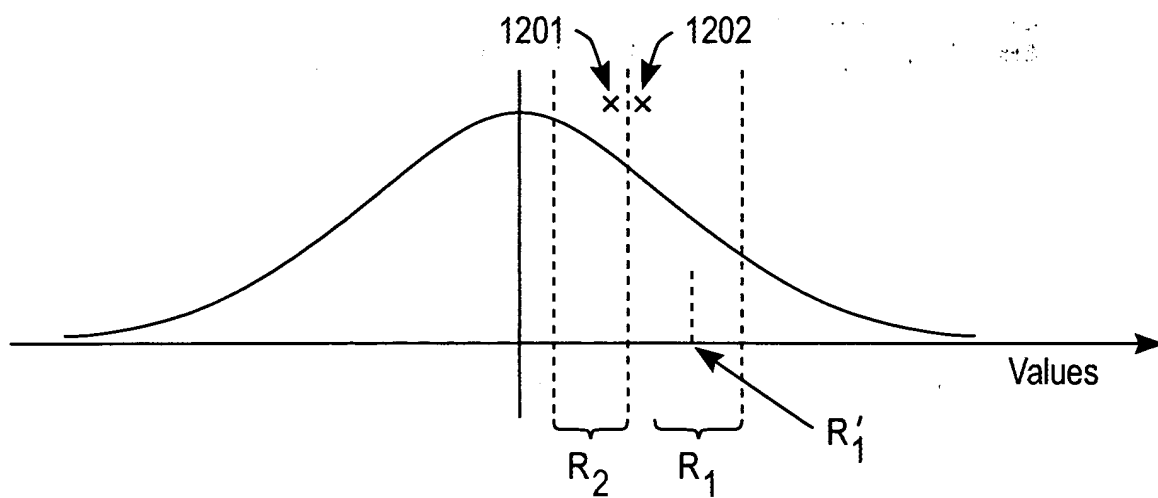


FIG. 12

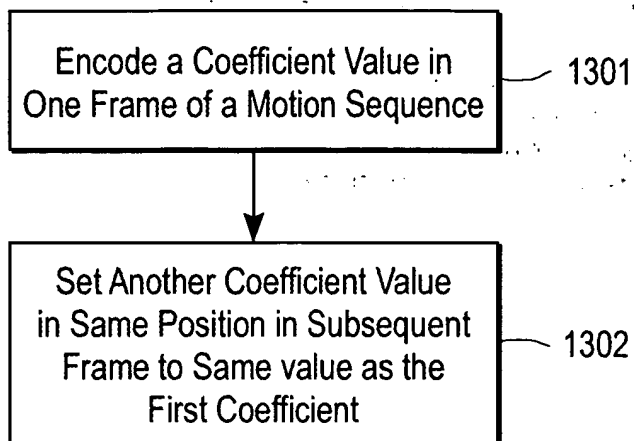


FIG. 13

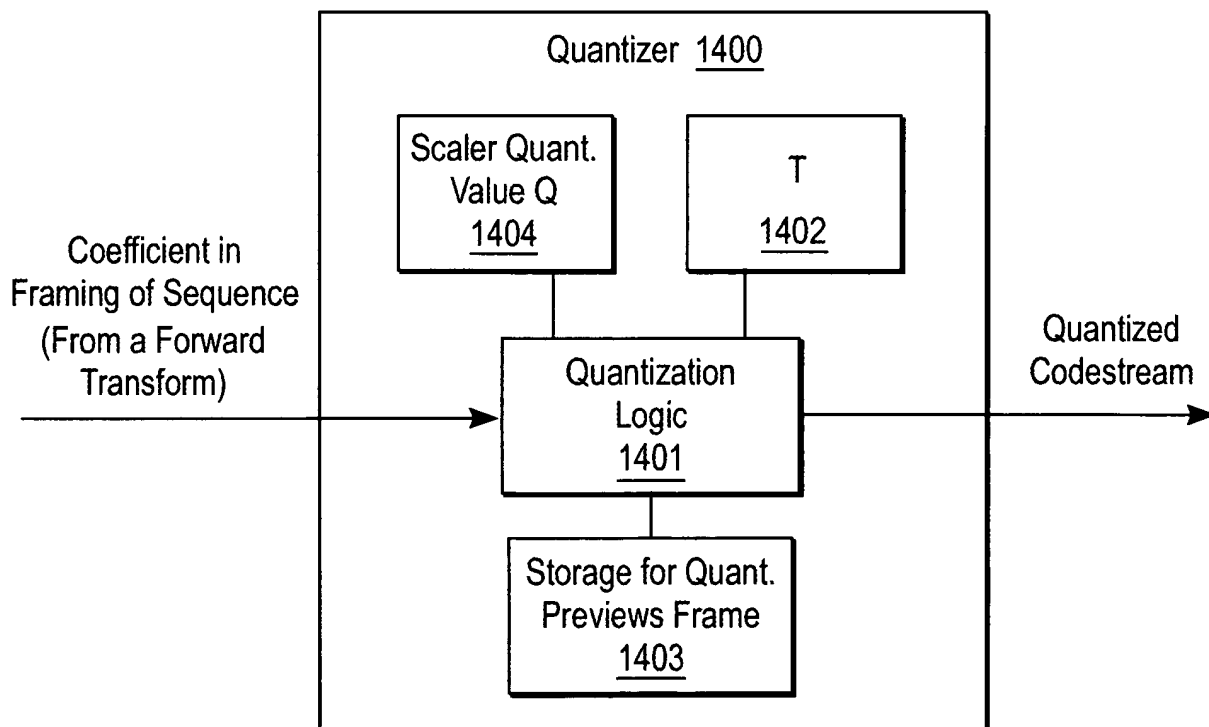


FIG. 14

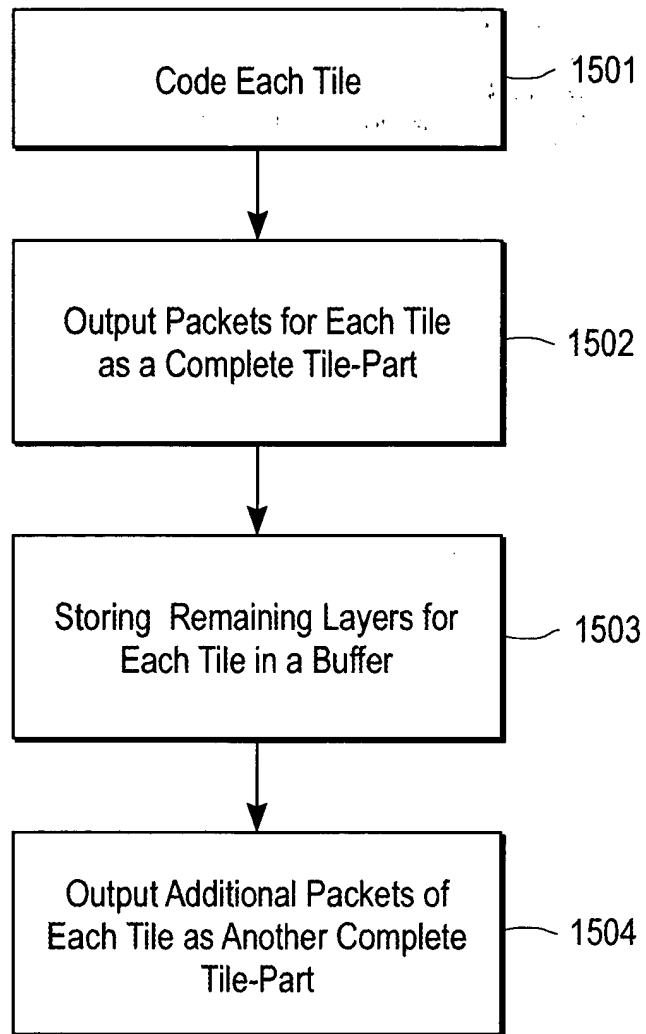


FIG. 15A

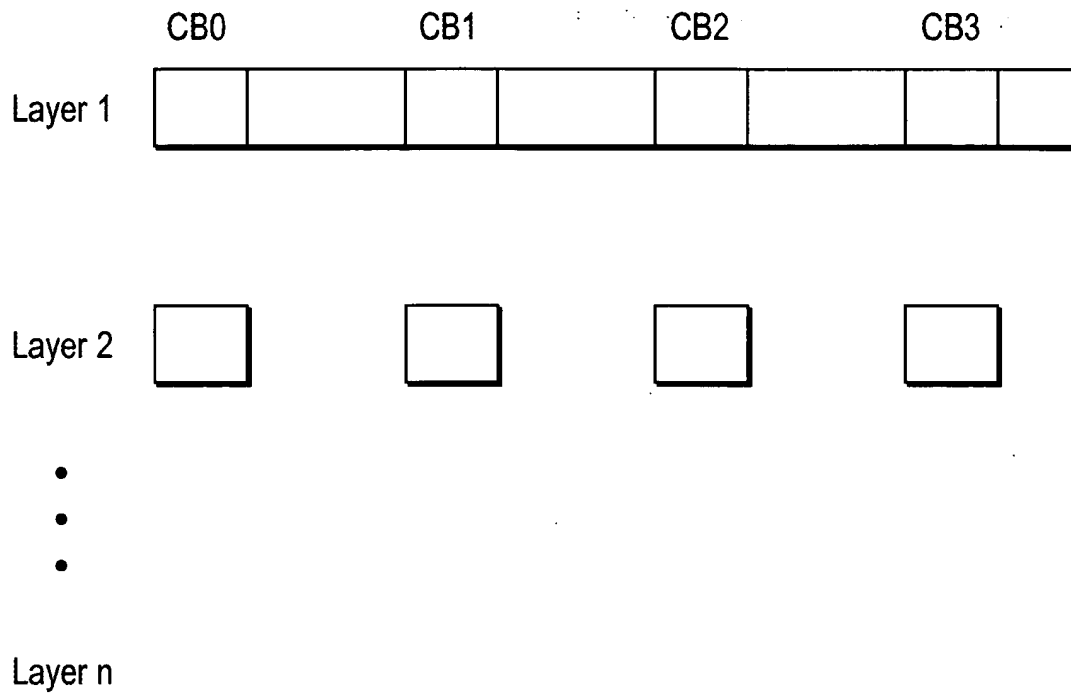


FIG. 15B

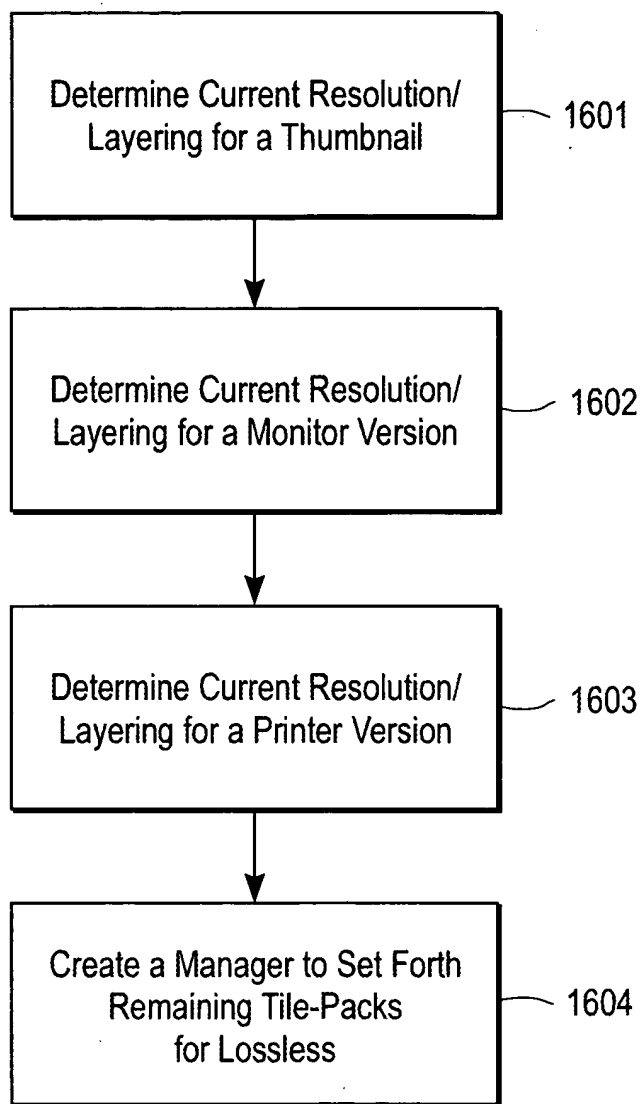


FIG. 16

| | | | | |
|---|---|---|---|--|
| 0 | 0 | 0 | 0 | |
| 0 | 0 | | | |
| 0 | 0 | 0 | | |
| 0 | | | | |
| 0 | | 0 | | |
| 0 | | 0 | | |

A = Lossless

| | | | |
|---|---|---|---|
| 0 | 0 | 0 | 0 |
| 0 | 0 | | |
| 0 | 0 | 0 | |
| 0 | | 0 | 1 |

B

| | | | |
|---|---|---|---|
| 0 | 0 | 0 | 1 |
| 0 | 0 | | |
| 0 | | 0 | |
| 1 | | 1 | |

C

| | | | | |
|---|---|---|---|--|
| 0 | 0 | 0 | 1 | |
| 0 | 0 | | | |
| 0 | 1 | 1 | | |
| 1 | | | | |
| 1 | | 1 | | |

D

| | | | | |
|---|---|---|---|--|
| 0 | 0 | 1 | 1 | |
| 0 | 0 | | | |
| 1 | 1 | 1 | | |
| 1 | | | | |
| 1 | | 1 | | |

E

| | | | |
|---|---|---|---|
| 0 | 0 | 1 | 1 |
| 0 | 0 | | |
| 1 | | 1 | |
| 1 | | 2 | |

F

| | | | | |
|---|---|---|---|--|
| 0 | 0 | 1 | 1 | |
| 0 | 1 | | | |
| 1 | 1 | 2 | | |
| 1 | | | | |
| 1 | | 2 | | |

G

| | | | | |
|---|---|---|---|--|
| 0 | 0 | 1 | 2 | |
| 0 | 1 | | | |
| 1 | 1 | 2 | | |
| 2 | | | | |
| 2 | | 2 | | |

H

| | | | | |
|---|---|---|---|--|
| 0 | 1 | 1 | 2 | |
| 1 | 1 | | | |
| 1 | 1 | 2 | | |
| 1 | 1 | | | |
| 2 | | 2 | | |

I

FIG. 17



| | | | |
|---|---|---|---|
| 0 | 1 | 1 | 2 |
| 1 | 1 | | |
| 1 | | 2 | |
| 2 | | 2 | |

J

| | | | |
|---|---|---|---|
| 1 | 1 | 1 | 2 |
| 1 | 1 | | |
| 1 | | 2 | |
| 2 | | | 2 |

K

| | | | |
|---|---|---|---|
| 1 | 1 | 2 | 2 |
| 1 | 1 | | |
| 2 | | 2 | |
| 2 | | 2 | 2 |

L

| | | | |
|---|---|---|---|
| 1 | 1 | 2 | 2 |
| 1 | 1 | | |
| 2 | | 2 | |
| 2 | | | 3 |

M

| | | | |
|---|---|---|---|
| 1 | 1 | 2 | 2 |
| 1 | 2 | | |
| 2 | | 2 | |
| 2 | | | 3 |

N

| | | | |
|---|---|---|---|
| 1 | 1 | 2 | 3 |
| 1 | 2 | | |
| 2 | | 2 | |
| 3 | | | 3 |

O

| | | | |
|---|---|---|---|
| 1 | 2 | 2 | 3 |
| 2 | 2 | | |
| 2 | | 2 | |
| 3 | | 3 | |

P

| | | | |
|---|---|---|---|
| 1 | 2 | 2 | 3 |
| 2 | 2 | | |
| 2 | | 3 | |
| 3 | | 3 | |

Q

| | | | |
|---|---|---|---|
| 2 | 2 | 2 | 2 |
| 2 | 2 | | |
| 2 | | 3 | |
| 3 | | | 3 |

R

FIG. 18

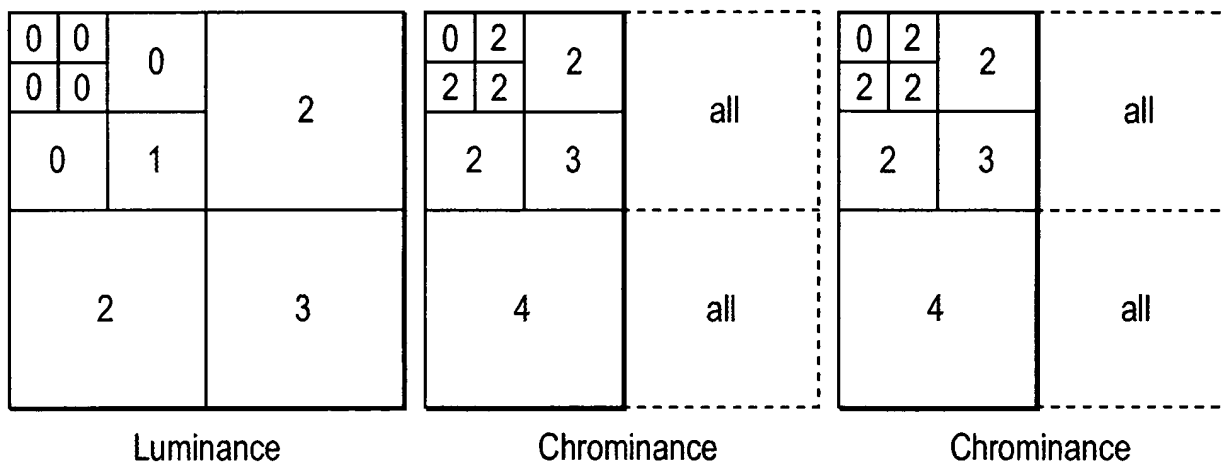


FIG. 19



2000

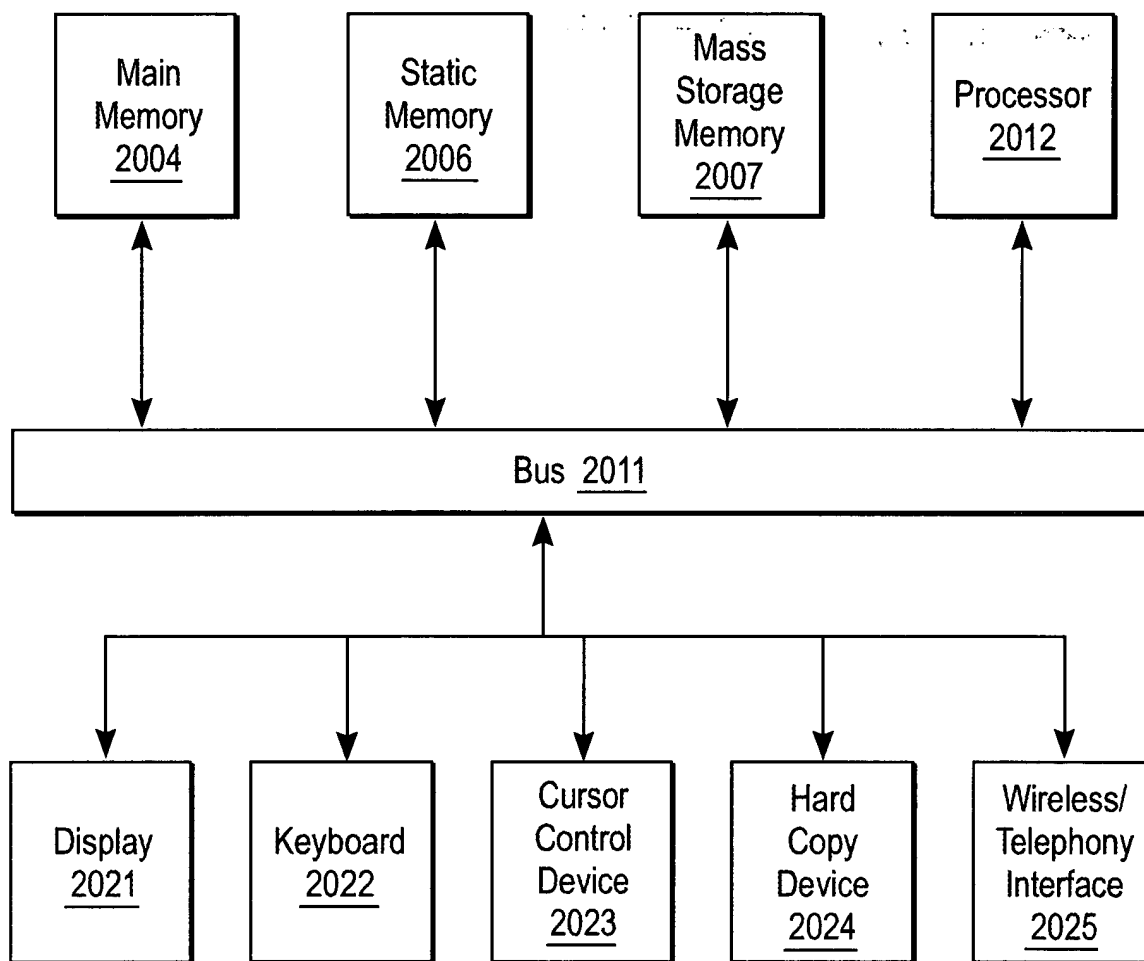


FIG. 20

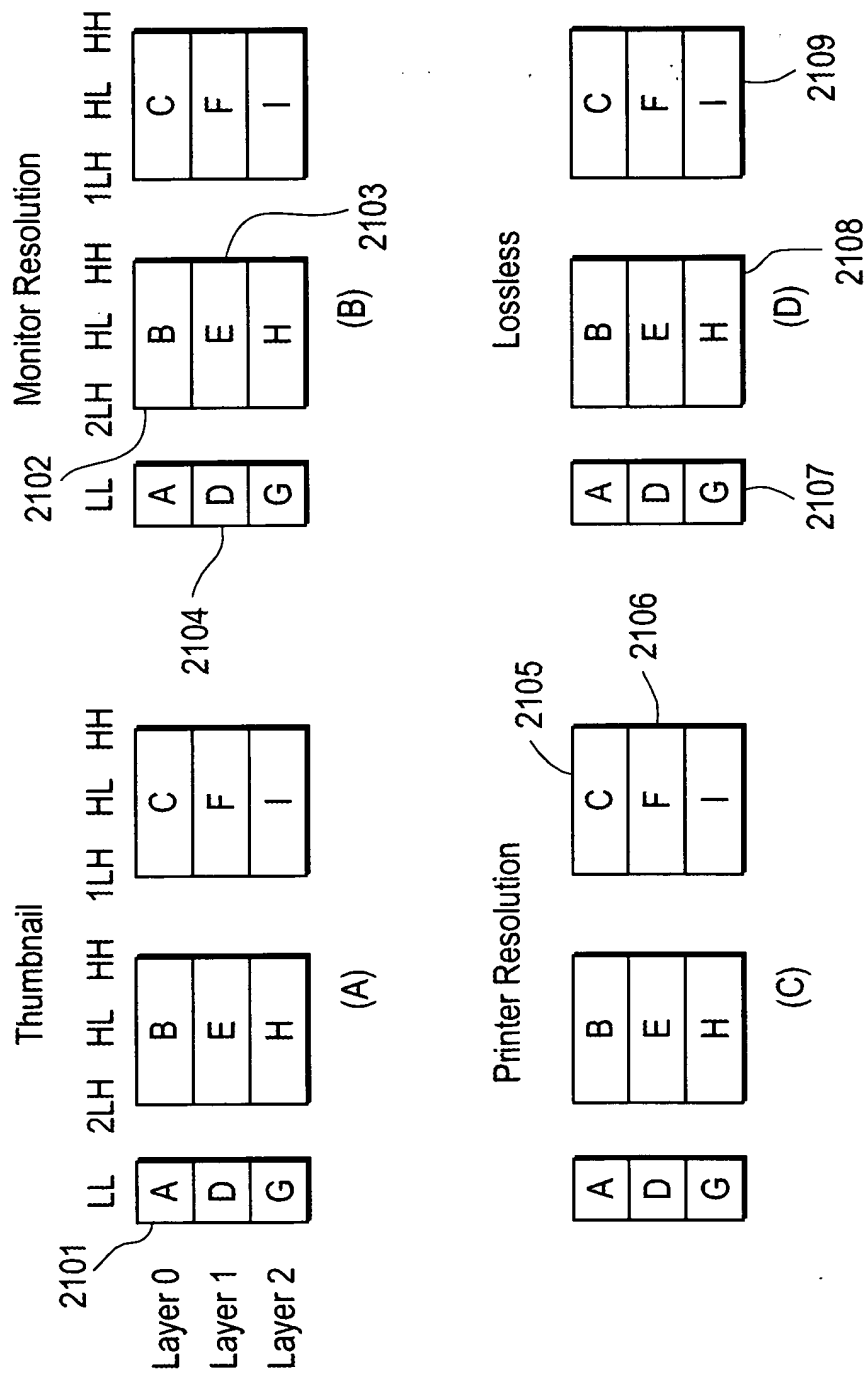


FIG. 21



| | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | | 0 | | | 3 | | | 8 |
| | 0 | 0 | 0 | 1 | 1 | 3 | 4 | 4 | 8 |
| 0 | 0 | 0 | 0 | 1 | 1 | 3 | 4 | 4 | 8 |
| 0 | 0 | 0 | 0 | 1 | 1 | 3 | 4 | 4 | 8 |
| 0 | 0 | 0 | 0 | 1 | 1 | 3 | 4 | 4 | 8 |
| 0 | 2 | 2 | 6 | 7 | 7 | 10 | 11 | 11 | 15 |
| 5 | 9 | 9 | 13 | 14 | 14 | 17 | 18 | 18 | 22 |
| 12 | 16 | 16 | 20 | 21 | 21 | 24 | 25 | 25 | 29 |
| 19 | 23 | 23 | 27 | 28 | 28 | 31 | 32 | 32 | 36 |
| 26 | 30 | 30 | 34 | 35 | 35 | 38 | 39 | 39 | 42 |
| 33 | 37 | 37 | 40 | 41 | 41 | 43 | 44 | 44 | 45 |
| 3LL | 3HL | 3LH | 3HH | 2HL | 2LH | 2HH | 1HL | 1LH | 1HH |

FIG. 22

| | | | | | | | | | | |
|-----|--------|-----|--------|-----|--------|-----|--------|-----|--------|-----|
| | | 1 | | 1 | | 2 | | 2 | | 2 |
| | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 |
| 0 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 |
| 0 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 |
| 0 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 |
| 0 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 |
| 0 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 |
| 0 | 1 | 1 | 1 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 0 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 0 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 0 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 3LL | 5HL,LH | 5HH | 4HL,LH | 4HH | 3HL,LH | 3HH | 2HL,LH | 2HH | 1HL,LH | 1HH |

FIG. 23

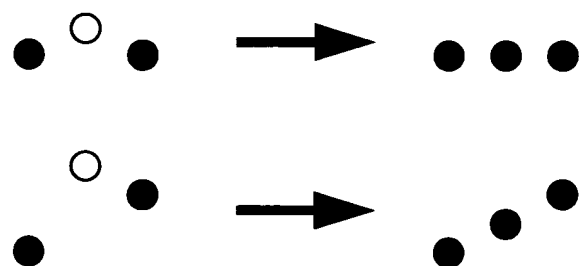


FIG. 24



Typical Decode of Color Images

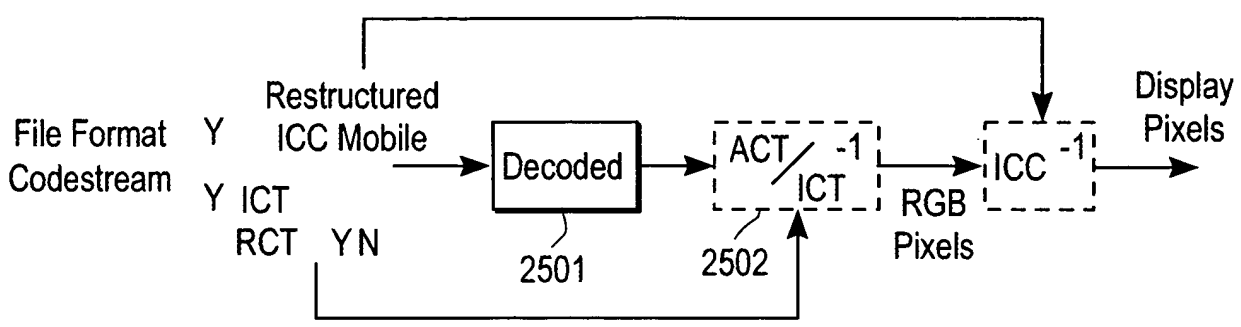


FIG. 25

Dumb Camera Encoder

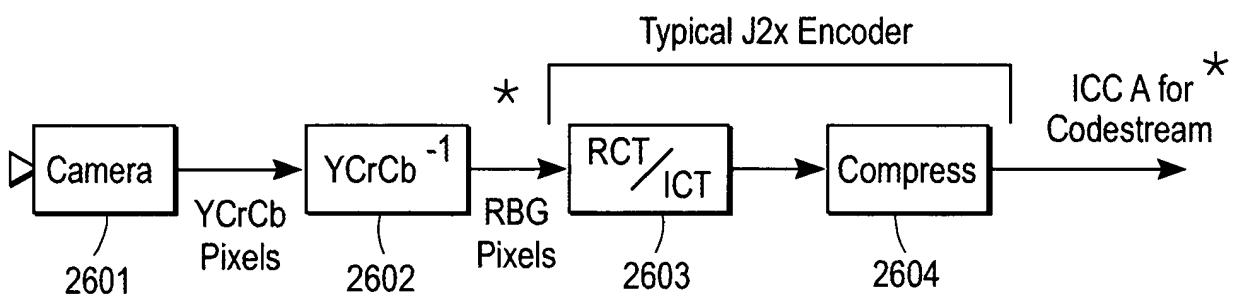


FIG. 26

Simple Camera Encoder

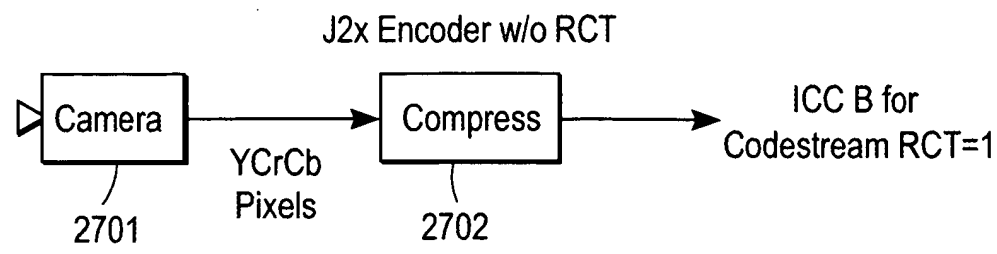


FIG. 27

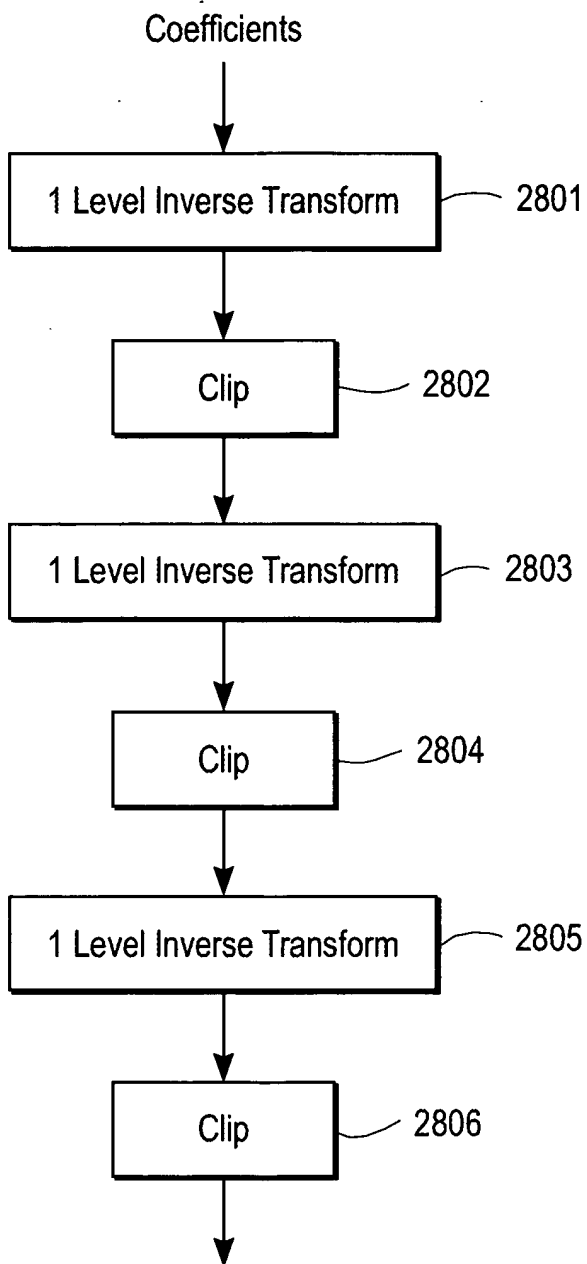


FIG. 28